



Barbara Rinehart

SALES TRAINING VACCINE

My responsibilities were:

- Developed objectives and outline
- Wrote content for 44-page training manual
- Created self-assessment questions
- Prepared glossary

History of Development

Learning Objectives

After reading this section you should be able to:
 Differentiate between nonconjugated and conjugate Hib vaccines
 List the various Hib conjugate vaccines currently licensed in the United States

Nonconjugated vs. Conjugated Vaccines

In 1974, a purified, high molecular weight type b polysaccharide (PRP) was one of the first generations of vaccines against invasive type b diseases. This vaccine contained PRP as the only antigen— it is referred to as a nonconjugated vaccine. This vaccine proved to be effective in toddlers but did not protect infants under the age of eighteen months. Therefore, a second generation of vaccines was developed in which the PRP was combined with a protein— this is referred to as a conjugate vaccine. Conjugate technology, which links a less immunogenic substance (the PRP) with a more immunogenic substance (in this case, a protein); makes it possible to achieve a satisfactory protective response to otherwise poorly immunogenic antigens. This technology is also making it possible to develop vaccines against a number of other bacterial diseases.

antibody:
 a protein that is produced by the body as a result of introduction of an antigen and which has the ability

All conjugate vaccines involve the use of a protein carrier and a polysaccharide hapten. By conjugation of a polysaccharide to a carrier protein, antibody response to the polysaccharide is enhanced after vaccination. Many HIB conjugate vaccines employ the same hapten, PRP. The protein carrier is covalently linked (conjugated) to the PRP. Immunologic responsiveness to the protein carrier is also conferred upon the polysaccharide. An immune response to a conjugated vaccine is determined by helper T-cell activation. Studies in animals and humans have confirmed that conjugate vaccines are primarily T-cell dependent immunogens. A list of the conjugated Hib vaccines currently available in the United States is given in Table 1.

Module:

